

VOLTAGE CONTROLLED TEMPERATURE COMPENSATED SMD CRYSTAL OSCILLATOR



3.2 X 2.5 X 0.9mm

ASTX-11, ASVTX-11



FEATURES:

- 3.2 x 2.5 x 0.9mm miniature package
- Low current consumption 1.5mA for 19.68MHz
- Vc function corresponds to PLL circuits
- Suitable for RoHS reflow profile

APPLICATIONS:

- Cellular and cordless phones
- Standard OSC for exact equipment
- Mobile communication equipment
- Portable radio equipment and music player.
- PLL

STANDARD SPECIFICATIONS:

Parameters	Minimum	Typical	Maximum	Units	Notes
Frequency Range	10	-----	40	MHz	
Standard Frequencies:	10, 13, 14.4, 16.3676, 19.2, 19.8, 20, 24.5535, 26, 33.6, 38.4, 39, 40			MHz	
Operating Temperature:	-30	-----	+75	°C	
Storage Temperature:	-40	-----	+85	°C	
Frequency Stability $\Delta f/f_0$ vs Tolerance (@+25°C): Temperature (ref. to +25°C): Supply Voltage Change (Vdd \pm 5%): Load Change (ZL \pm 10%):	-0.5 -2.5 -0.2 -0.2	----- ----- ----- -----	+0.5 +2.5 +0.2 +0.2	ppm	See option (Tabel 1)
Supply Voltage (Vdd):	+3.135	+3.3	+3.465	V	See option
Aging (first year @+25°C):	-1.0	-----	+1.0	ppm	
Supply Current (Icc):	-----	-----	1.5	mA	~19.68MHz
	-----	-----	2.0	mA	~32.00MHz
	-----	-----	2.5	mA	~40.00MHz
Voltage Control Function (for ASVTX-11) Control Voltage (Vcc): Frequency Tuning Range: Frequency Tuning Transition: Input Impedance:	+0.5 \pm 8 Positive 500	+1.5 650	+2.5	Vdc ppm k Ω	
Output Voltage: Load: Waveform:					
	0.8			Vp-p	
	10k Ω //10pF				
Phase Noise:		-135		dBc	@1kHz

OPTIONS & PART IDENTIFICATION: [Left blank if standard]

ASVTX-11 or ASTX-11 - - MHz - -

Vdd (V)
Blank: 3.3V \pm 5%
A: 3.0V \pm 5%
B: 2.8V \pm 5%
C: 2.5V \pm 5%

Frequency in MHz
Please specify the frequency in MHz. e.g. 19.200MHz

Packaging
Blank: Bulk
T: 1000pcs/reel
T3: 3000pcs/reel

Table 1: Frequency Stability vs Operating Temperature

	\pm 2ppm	\pm 2.5ppm	\pm 3ppm	\pm 4ppm	\pm 5ppm
0°C ~ +50°C	D20	D25	D30	D40	D50
-10°C ~ +60°C	E20	E25	E30	E40	E50
-20°C ~ +70°C	F20	F25	F30	F40	F50
-30°C ~ +70°C	G20	G25	G30	G40	G50
-30°C ~ +85°C	H20	Std.(Blank)	H30	H40	H50
-40°C ~ +85°C	I20	I25	I30	I40	I50

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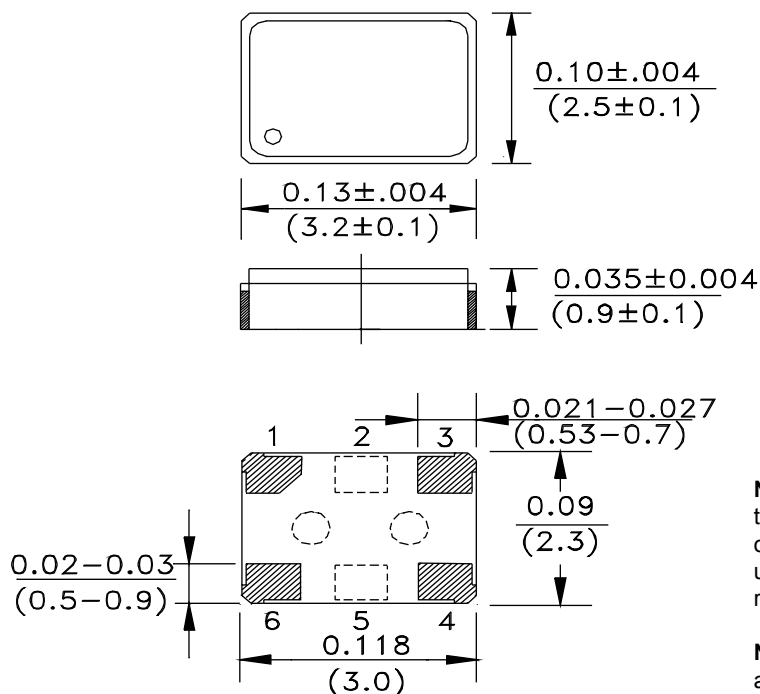
3.2 X 2.5 X 0.9mm

ASTX-11, ASVTX-11

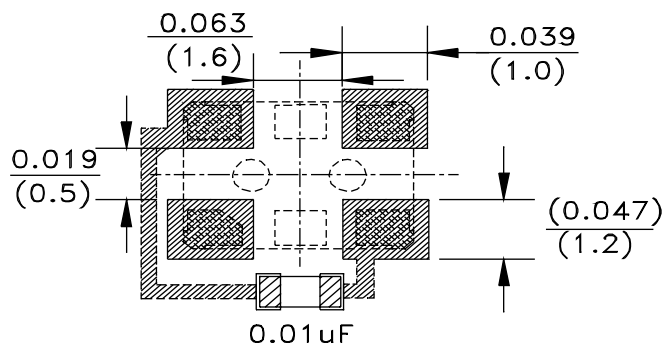


RoHS
Compliant

OUTLINE DRAWING:



Recommended land pattern



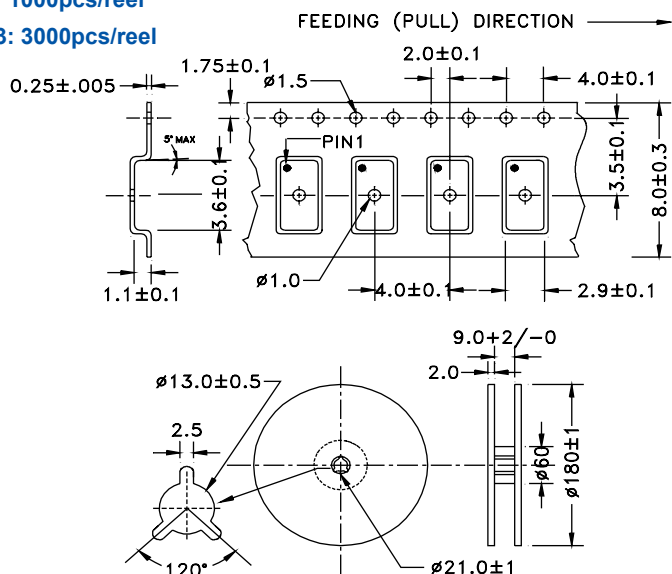
Note 1: It is not recommended that paths go underneath the oscillator. If needed, please use multi-layer PCB board or resist coating.

Note 2: Recommend using an approximately $0.01 \mu\text{F}$ bypass capacitor between Pin 3 and 6.

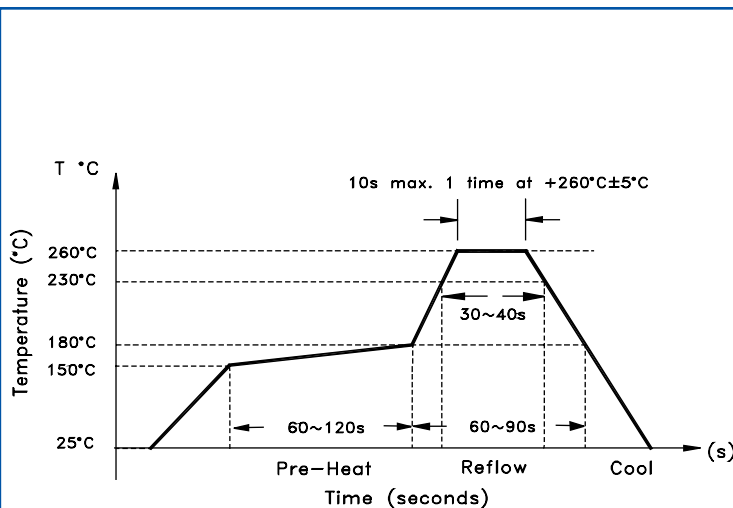
PIN	FUNCTION	
	VCTCXO	TCXO
1	Vcc	GND
2	N.C.	
3	GND	
4	OUTPUT	
5	N.C.	
6	Vdd	

TAPE & REEL:

T: 1000pcs/reel
T3: 3000pcs/reel



REFLOW PROFILE:



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